

## Request for Laboratory test

### Product information:

Processing Method for Extra Virgin Coconut Oil, developed by Christoph Erhard Day in Limunsod, Brgy. Liguron, 8708 Talakag/Bukidnon, cellphone 09482322593

1. Collect mature Coconuts
2. Dehusk coconuts with Dehusker as showed in the pictures below
3. Check each dehusked coconut and select only good ones for further processing
4. Crack coconut shell using bolo
5. Check again the cracked coconuts and discard the ones with bad smell and defects
6. Grate the cracked good coconuts using manual grater developed and fabricated by Christoph Erhard Day. The ground coconuts go into a stainless steel bowl for transportation to the dryer. If storing during the night or rainy days is needed, partially dried coconut grates can be stored in a clean margarine drum.
7. Dry the grated coconuts under the sun until crispy. Drying time varies depending on weather conditions. For drying amakan sheets covered with clean cloth can be used or trapal or sun oven with thermometer to control temperature. Temperature shall not exceed 45 Degree Celsius to ensure raw food quality. Raw food quality can only be guaranteed by using solar oven, solar dryer or mechanical dryer. Raw food Quality is our goal which is not yet achieved.
8. Put the dried coconut grates in the pressing cylinder using a wooden stamper. Put at least 800g in the small diameter cylinder (except last pressing of a day, where it can be less than 800g). Below and above the coconut grates is a stainless metal disc, to keep the grates inside the cylinder while pressing
9. Put the filled cylinder including metal discs on the 50t manual oil expresser, developed and fabricated by Christoph Erhard Day, put piston on top of the filled cylinder and center both using the screw above the piston.
10. Start extracting the oil by moving the lever of the 50t hydraulic jack up and down. The process takes around 15 min and makes around 400 ml per pressing. During the pressing only the oil comes out which is filtered through a cheese cloth or cotton ball to remove rough particles and direct filled in a clean glass container
11. Glass container will be sealed when full.

### Materials/Tools/Equipment

1. Expresser
2. Dehusker
3. Manual Coconut Grater
4. Cotton Cloth on Amakan sheet for drying Coconut grates
5. Stainless bain
6. Stainless strainer
7. Stainless and wooden spatula
8. Glass Jars
9. Cotton Cloth for wiping
10. Wooden Table

Ingredient:

- Mature Coconuts

Pictures and Video about our first trials with our new equipment for making Extra Virgin Coconut Oil

The attached Video shows the shows an experimental study about time and accumulated EVCO production



Presscake made with small diameter cylinder



Presscakes of one day production of Extra Virgin Coconut Oil. One Presscake is made with our big diameter cylinder. Using 2 diameters is to find out whether there is a difference in the extraction rate between the small and the big diameter pressing cylinder. As of now I can't say it finally, because it needs one series of at least three pressings with the big diameter cylinder.



The making of a coconut horse



The Making a flat surface to assemble the portal for the drive shaft.



The finish Coconut Horse



The drive of the Coconut Horse



Close look to the driveshaft of the Coconut Horse



Connection method of the axel for the pedals



First operation



First operation after some coconuts being grinded



Closer view of the grinding process



The ground material



Close view to the ground material



My wife also tries to operate the Coconut Horse



The turning point



Improvement: wooden nails to stabilize the portal. As it can be seen, the frame is made of 100% wood.



### Dehusker

With our next production, we will make more pictures. There we will also first use our new pressing cylinder which is made of thicker material (the old one got a belli because of the high pressure, which makes removing the press cake hard and lets coconut grinds stuck in between piston and cylinder) and has more holes to improve the flow of oil.